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United States Patent [19]**Register**[11] **Patent Number:** **5,673,170**[45] **Date of Patent:** **Sep. 30, 1997**[54] **SECONDARY DISPLAY SYSTEM FOR COMPUTER**[75] **Inventor:** **David S. Register**, Austin, Tex.[73] **Assignee:** **Dell U.S.A., L.P.**, Austin, Tex.[21] **Appl. No.:** **691,606**[22] **Filed:** **Oct. 4, 1996****Related U.S. Application Data**

[62] Division of Ser. No. 544,341, Oct. 17, 1995, Pat. No. 5,594,620, which is a continuation of Ser. No. 92,846, Jul. 16, 1993, Pat. No. 5,590,021.

[51] **Int. Cl.⁶** **G06F 1/16; H05K 7/02**[52] **U.S. Cl.** **361/681; 248/923**[58] **Field of Search** 364/708.1; 248/186.1,
248/917-923; 312/223.2, 223.3; 361/681,
682[56] **References Cited****U.S. PATENT DOCUMENTS**

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Apparatus and method for a secondary display system for a computer are disclosed. A secondary display system of the present invention includes a flat panel display configured such that the display is conveniently located both during and between use thereof. The system comprises a liquid crystal display module (LCDM), a corresponding display controller connected to the LCDM via an appropriate interface, and a mounting device connected to the LCDM for mounting and positioning the LCDM in close proximity to the monitor of a computer. In a preferred embodiment, the mounting device comprises a rectangular plate, which is horizontally disposed between a chassis and a monitor of the computer, and the positioning means comprises a single axis hinge, which is connected to a front corner of the plate such that the hinge rotates on a vertical axis. In one embodiment, one edge of the LCDM is attached to the hinge so that the LCDM may be rotated on a vertical axis. In another embodiment, the LCDM is pivotally attached to two arms, which in turn are pivotally attached to the hinge so that the LCDM can be rotated about multiple vertical axis. During use, the LCDM may be rotated such that its display screen is coplanar with the display screen of the monitor. Between uses, the LCDM may be rotated such that its display screen is substantially orthogonal to the display screen of the monitor.

24 Claims, 2 Drawing Sheets